COLLECTING IN SOUTHERN FLORIDA, THE BAHAMAS AND CUBA

BY D. L. EMERY

During the past summer, with about two months of spare time, I decided on a trip to the West Indies. I left St. Petersburg on July tenth for Miami, where I was joined by Mr. C. C. Allen, a most ardent and thorough collector.

The east coast of Florida is a valuable field and a great many species of both land and marine shells were added to our collections. The hammocks in the vicinity of Miami are rich with the Liguus, Drymaeus and Helicina, while the so-called reefs abound with Polygyra, Urocoptis, Chondropoma, Thysanophora, Microceramus etc. The Atlantic beach furnishes us with a goodly number of Spirula and Ianthina, and the shores of the outlying keys yielded Lucina, Loripes, Iphigenia, Strombus, Modulus, Cerithium and Neritina. The shrubbery near Miami Beach fairly teemed with Cepolis, Drymaeus, Helicina and *Cerion incanum,* while on the grass we found Succinea and in the canal Perna. On the jetties at the mouth of the harbor we collected several species of Thais and Nerita, and farther up were Tectarius, Echinella, Planaxis, Littorina and Siphonaria. One side trip from Miami was by stage to Fulford, where in the sand thrown up by the dredge in a new subdivision were may varieties of marine forms in a fine state of preservation, which had been buried for many years. Among them were some of the largest and finest *Lucina jamaicensis* I have seen. The periostracum on them was almost perfect while the hinge ligament was practically gone. On the higher beach we found the same as at Miami Beach, several good Ianthina and Spirula. In the marshy land were a quantity of the *Auriculastrum pellucens,* mostly dead, and *Cyrenoidea floridana.*

After spending all the time we thought we could spare, we took passage on the S. S. Nassauvian of the Allan line for Nassau. We spent about three weeks on the island of New Providence with headquarters in Nassau. I will state here

that the trip was not so much for all the species we could gather as for those from half an inch up which we could collect in quantity for our exchange lists.

Nassau proper, with its rocky and sandy beaches, its rising sunny slopes, lime rock reefs, and at the rear the dense thickets, furnishes all the varieties of collecting one could wish. On the rocky shores we found Nerita, Neritina, Leucozonia, Acmaea, Columbella, Strombus, Livona, Tectarius, Echinella, Siphonaria and many small forms not yet identified. Chitons, of two species, were most abundant. On the Sea Grape and other trees along the shore road we gathered several varieties of Cerions, Drymaeus, Cepolis and a very few small *Oxystyla undata*. This species was one we had set our hearts on, and look as we would, for two weeks not a good live specimen came to our notice. Finally one day while out to Waterloo after Drymaeus I called my partner's attention to a very large one up in the crotch of a gumbo-limbo tree, supposing it to be inhabited by a soldier crab as all the others we had found. What was my astonishment upon dislodging him to find a beautiful live specimen. The next morning, looking over the side of the piazza over Mr. Allen's store, I had to call him up from below to see another almost as large on the side wall of the house. This proved to be alive also, making two to my credit. Of course my friend could not hide his disappointment and I could not let the opportunity for a "good jolly" get by, so had to remind him several times that it was too bad to live for two years in a place and get a little wild fellow domesticated and then have a friend come over and grab it. In some places on the island the soldier crabs are so thick that on a dull morning one can scrape them up by the bucketful. Among these we managed to find about three dozen each of fine Oxystylas.

The Drymaeus proved to be quite scarce until one slightly foggy morning on a pair of sapodilla trees in a yard of one of the natives we gathered over 150 fine specimens. We thought the find and the liberty of climbing the trees worthy of a sixpence from each of us. In the limestone walls of the quarries and some of the street cuts we found a number of perfect

fossils of the *Cerion agassizii.* On the grass at Fort Charlotte *Succinea barbadensis* was very plentiful. In the cut at Union street were *Bulimulus sepulchralis, Succinea ochracina, Polygyra cereolus, microdonta* and a small Thysanophora. One day we walked across the island to the south beach, and among the palmettos were *Chondropoma revinctum* and *Cerion agrestina.* On the shore which was here both sand and rocks we found Lucina, Strombus, Asaphis, Siphonaria and Cerithiums. Here was a landing place for a conch fisherman, and in front of his cabin were heaps of thousands of the *Strombus gigas,* all with a hole on one side of the spire, where they loosen the part of the animal which is attached. These so-called conchs are a staple article of food with the natives, at the market, in the little cafes, and on all kinds of dry-goods box stands. Along the street, night and day, one can buy the little conch fritters for a penny and the smaller size for a halfpenny. As a novelty these fritters are O.K. but for a regular diet they are the limit, as I found out on my former visit when all the hotels and restaurants were closed.

Jamaica was our objective point, and after providing ourselves with a chart of the island, folding cots and mosquito bars, we waited several days for the steamer, running on a three-week schedule. At the last minute we were refused tickets on account of not having passports. A regulation wartime passport is required going from one British province to another in the same sea. We decided on a trip to Cuba, and the next sailing of the steamer for Miami saw us on the way. After another trip to Brickel's hammock and steaming out about 400 more Liguus we took the Fla. East Coast R. R. for Key West. The trip down is one certainly to be remembered, especially if one tries to study the country and ask a few questions to get a conception of the immense undertaking of constructing and maintaining a railway over these keys and the sea. It is one of the greatest engineering feats of the modern age.

At Key West the collecting is what may be termed slim. We managed to obtain a number of Cerithium, Columbella, Siphonaria, Succinea, Cerion, Polygyra and Littorina. The

shore yielded about as much as could be expected with a mean tide of less than two feet.

After what I had heard of the city of Key West, I was greatly disappointed to see the sailing boats and launches which were going to ruin in the harbor, and the large number of warehouses, stores and residences with the windows and doors boarded up, cigar factories closed and the whole place with a look of decline. While here we made the acquaintance of the station master at Cudjoe's Key, and from our description of *Oxystyla floridensis* he thought they were found there. Consequently when he returned we went up with him for a day, and our search resulted in two badly broken and bleached specimens that looked as though the storms brought them. Our day was not wasted, however, as we found a goodly number of the two varieties of *Cerion incanum* which neither of us had seen before, and a Succinea not yet identified.

At Havana everything had a look of prosperity—in fact we found it the same wherever we went on the island. We made Havana our headquarters and took trips every day to some of the outside points for collecting. Santiago de los Vegas, Guanajay, Guayabal, Guanabacoa and Playa all proved good collecting ground, and at Matanzas, where we found abundant species. We visited the museum connected with the high school. This, as all other school museums I have seen, was but poorly represented in the conchological line, while the mammalia and fishes were much better. In the vicinity of some of the caves we had fine collecting, especially Liguus and *Cepolis bonplandi*. Everywhere we went near the shore we found Cerions in profusion. At Guayabal is a high ledge or bluff with a thick growth of hard woods and vines; here we found the best collecting. The Megalomastoma, Chondropoma and Helicina, three species, were abundant, as well as many smaller forms.

List of Species Collected, as Far as Determined.

a, Florida; b, Bahamas; c, Cuba.

Acmaea leucopleura Gmel. var.? ..... b
punctulata Gmel. ... b
Ampullaria miamiensis Pils. a
Arca barbata Linn..... b
umbonata Lam. ..... b
Astraea tuber Linn. ..... a
americanum Gmel. .. a
longispinum Lam. ... a
Auriculastrum pellucens Mke. ..... a
Bulimulus sepulchralis Poey ..... b
Bullaria amygdalis Dillw. a
occidentalis A. Ads.. a
media Phil. ..... b
striata Brug. ..... a
Cepolis bonplandi Lam. .. c
cubensis Pfr. c
milleri Pfr. ..... b
multistriata Desh. .. c
troscheli Pfr. ..... b
varians Mke. .....a, b
Cerion agassizii Dall (fossil) ..... b
agrestina Mayn. .... b
eurystoma Mayn. .. b
glans Kstr. ..... b
carlotta Mayn. ..... b
incanum Binn. ..... a
fasciata W. G. B. .... a
saccharimeta P. & V.. a
mumia Brug. c
mumiola Pfr. c
mumia chrysalis Fér. c
ornatula Mayn. .... b
phoenicea M. & C. .. b
repitita Mayn. ..... b
santesoni Mayn. .... b
sculpta Mayn. ..... b
Cerithium eburneum Brug. .....a, b
minimum Gmel. vars. a, b
muscarum Say ..... a
variabile C. B. Ads. . a
Echinella nodulosa Gmel. a, b
Euglandina minor Fér.? . a
Eutrochatella sloanei Orb. c
Fasciolaria tulipa Linn... b
Fissurella barbadensis Gmel. .....b, c
nodosa Born. c
viridula Lam. ..... b
Helicina adspersa Pfr. .. c
clappi Pils. ..... a
orbiculata Say ..... a
submarginata Gray.. c
Ianthina fragilis Lam. ...a, b
Iphigenia braziliana Lam. a
Leucozonia cingulifera Linn. b
ocellata Gmel. ..... b
Liguus crenatus castanozonatus Pils. ..... a
eburneus Simp. ..... a
marmoratus Pils. .... a
miamiensis Simp. .... a
mosieri Simp. ..... a
fasciatus Mull. (Typical) c
castaneus Simp. ..... a

livingstoni Simp. .... a
ornatus Simp. ..... a
roseatus Pils. ..... a
testudineus Pils. .... a
versicolor Simp. ..... a
vexillum Lam. c
Lima scabra Dillw. ..... a
Littorina lineata Phil. ... b
mespilum Phil. ..... b
ziczac Chem. .....a, b
litterata Phil. ..... a
Livona pica Linn. ..... b
Lucina edentula Linn. ... a
Phacoides jamaicensis Lam. a
pennsylvanica Linn. .a, b
Codakia tigrina Linn. ....a, b
Margaritiphora radiata Lam. .....a, b
Megalomastoma mani Poey c
Chama macrophylla Gmel. a
Chondropoma dentatum Say a
ottonis Pfr. c
pfeigerianum Poey .. c
pictum Pfr. c
poeyanum Orb. c
revinctum Poey ..... b
tenuiliratum Pfr. c
Columbella mercatoria Linn. b
Conus mus Hwass. ..... b
Crepidula convexa Say ... a
plana Say ..... a
Cypraea exanthema Linn.. a
Cylindrella poeyana Orb.. b
jejuna Pfr. ..... a
Cyrenoidea floridana Dall. a
Detracia bulloides Mont. . b
Drymaeus bahamensis Pfr. b
dominicus Rve. ..... a
multilineatus Say ... a
Oxystyla undata Brug. ... b
Pecten ornatus Lam. ..... a
Pedalion bicolor A. Ads. a, b
chemnitzianum Orb. . a
Melina obliqua Lam. .... a
Physa acuta Drap. ..... b
Planaxis lineatus Cocta...a, b
nucleus Wood ..... a
Pleurodonte auricoma Fér. c
minor Fér. c
provisoria Pfr. ..... b
Polygyra auriculata Say.. a
microdonta Desh. ... b
septemvolva Say .... a
Praticolella griseola Pfr. . c
Proserpina depressa Orb. . c
Rumina decollata Linn.... c
Siphonaria alternata Say . a
brunnea Hanl. ..... b
naufragum Stimp. ... a
Sistrum nodulosum C. B. Ads. .....a, b
Melampus bidentatus Say. a
coffeus Linn. ..... a
gundlachi Pils. ..... b
Microceramus gossei Pfr.. b
pontificus Gld. ..... a
Modulus modulus Linn. .. a
floridanus Conr. ..... a
Muricidea hexagona Lam. a, b
Murex pomum Gmel. .... b
Nerita peloronta Linn. ...a, b
tessellata Lam. .....a, b
versicolor Gmel. .....a, b
Neritina pupa Linn. .... b
virginea Linn. ..... a
viridis Lam. ..... a

Oleacina oleacea straminea Desh. c
solidula Pfr. .....a, b
Opeas micra Orb. .....a, b
Opisthosiphon bahamensis Shutt. ..... b
Ostrea elongata Linn.? var. a
Spirula peronii Lam. ....a, b
Spondylus echinatus Mart. a
Strombus bituberculatus .... Lam. ..... a
gigas Linn. .....a, b
Subemarginula octoradiata Gmel. ..... b
Succinea barbadensis Guild. b
campestris Say ..... a
luteola Gld. ..... a
ochracina Gundl. .... b
Tectarius muricatus Linn. a, b, c
Thais deltoidea Lam. ....a, b
floridana Conr. ..... a
haemastoma Linn. ... a
patula Linn. .....a, b
undata Linn. .....a, b
Thysanophora vortex Desh. a
Truncatella bilabiata Pfr. a, b
caribaensis Sowb. ....a, b
Urocoptis bahamensis providentia Pils. ..... b
elegans Pfr. c
Vermicularia spirata Phil. a, b
Vivipara georgiana Lea .. a

EULOTA MAACKII, A SIBERIAN SNAIL

BY T. D. A. COCKERELL

About the middle of the last century R. Maack explored the Amur and Ussuri districts in eastern Siberia. This scientific pioneer made the most of his opportunities, and the results were published in St. Petersburg in three large volumes, 1859 (Amur) and 1861 (Ussuri). Consequently, when my wife and I recently visited Okeanskaja, on the coast near Vladivostok, we noted that the most magnificent butterfly of the region was *Papilio maackii* Ménètries, and the largest and handsomest snail was called *Eulota maackii* Gerstfeldt. Among the plants, Ruprecht and Maximowicz described from the Ussuri district a leguminous genus *Maackia*, which unexpectedly proved inseparable from *Cladastris*, based on a single species growing in Kentucky, Tennessee and North Carolina. There are also species of plants bearing the name of Maack; thus *Delphinium maackianum*, *Lonicera maackii* and *Prunus maackii*